U.S. DEPARTMENT OF COMMERCE PATENT & TRADEMARK OFFICE

B/O Form PTO-1390 **Transmittal Letter to the United States Designated/Elected Office (DO/EO/US) Concerning a Filing Under *35 USC 371***		*Attorney's Docket Number* JEK/Papadopoulos
		U.S. Application Number (if known) 09/485679
International Application Number PCT/EP99/03107	*International Filing Date* 06 May 1999	*Priority Date Claimed* 29 June 1998
Title of Invention MOBILE RADIO SYSTEM WITH DYNAMICALLY ALTERABLE IDENTITY		
Applicant(s) for DO/EO/US Nikolaos PAPADOPOULOS et al.		

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items under *35 USC 371*:

1. ☒ This is a **FIRST** submission of items concerning a filing under *35 USC 371*.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under *35 USC 371*.
3. ☒ This express request to begin national examination procedures *(35 USC 371(f))* at any time rather than delay examination until the expiration of the applicable time limit set in *35 USC 371(b)* and PCT Articles 22 and 39(1).
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed *35 USC 371(c)(2)*.
   a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☒ has been transmitted by the International Bureau.
   c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ A translation of the International Application into English *(35 USC 371(c)(2))*.
7. ☒ Amendments to the claims of the International Application under PCT Article 19 *(35 USC 371(c)(3))*
   a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☐ have been transmitted by the International Bureau.
   c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
   d. ☒ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 *(35 USC 371(c)(3))*.
9. ☒ An oath or declaration of the inventor(s) *(35 USC 371(c)(4))*. (☐ Executed ☒ Unexecuted)
10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 *(35 USC 371(c)(5))*.

Items 11 to 16 below concern other document(s) or information included:

11. ☐ An Information Disclosure Statement under *37 CFR 1.97* and *1.98*.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with *37 CFR 3.28* and *3.31* is included.
13. ☒ A **FIRST** preliminary amendment.
    ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☒ Other items or information: 3 sheets of drawings

Application Number (if Known)	International Application Number	Attorney's Docket Number
09/485679	PCT/EP99/03107	JEK/Papadopoulos

	Calculations	PTO USE ONLY
17. The following fees are submitted: **Basic National Fee *(37 CFR 1.492(a)(1)-(5))*:** ☒ Search report has been prepared by the EPO or JPO . . . . . $840.00 ☐ International Preliminary Examination Fee paid to USPTO *(37 CFR 1.482)* . . . . . $670.00 ☐ No International Preliminary Examination Fee paid to USPTO *(37 CFR 1.482)* but International Search Fee paid to USPTO *(37 CFR 1.445(a)(2))* . . . . . $690.00 ☐ Neither International Preliminary Examination Fee *(37 CFR 1.482)* nor International Search Fee *(37 CFR 1.445(a)(2))* paid to USPTO . . . . . $970.00 ☐ International Preliminary Examination Fee paid to USPTO *(37 CFR 1.482)* and all claims satisfied provisions of PCT Article 33(1)-(4) $96.00		
ENTER APPROPRIATE BASIC FEE AMOUNT	**$ 840.00**	
Surcharge of **$130.00** for furnishing the oath or declaration later than ☐ 20 ☐ 30 months from the earliest claimed priority date *(37 CFR 1.492(e))*.		

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total Claims	16 -20 =		× $18.00		
Independent Claims	5 -3 =	2	× $78.00	$ 156.00	
Multiple Dependent Claims (if applicable)			+ $260.00		
TOTAL OF ABOVE CALCULATIONS				**$ 996.00**	
Reduction by ½ for filing by small entity, if applicable. Verified Small Entity Statements must also be filed (Note *37 CFR 1.9, 1.27, 1.28)*					
SUBTOTAL				**$ 996.00**	
Processing fee of **$130.00** for furnishing the English translation later than ☐ 20 ☐ 30 months from the earliest claimed priority date *(37 CFR 1.492(f))*.					
TOTAL NATIONAL FEE				**$ 996.00**	
Fee for recording the enclosed assignment *(37 CFR 1.21(h))*. The assignment must be accompanied by an appropriate cover sheet *(37 CFR 3.28, 3.31)*. **$40.00** per property.					
TOTAL FEES ENCLOSED				**$ 996.00**	
Amount to be:				Refunded:	
				Charged:	

a. ☒ A check in the amount of **$996.00** to cover the fees is enclosed.

b. ☐ Please charge my **Deposit Account Number 02-0200** in the amount of $ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to **Deposit Account Number 02-0200**. A duplicate copy of this sheet is enclosed.

Note: Where an appropriate time limit under *37 CFR 1.494* or *1.495* has not been met, a petition to revive *(37 CFR 1.137(a) or (b))* must be filed and granted to restore the application to pending status.

BACON & THOMAS, PLLC
625 SLATERS LANE - FOURTH FLOOR
ALEXANDRIA, VIRGINIA 223124-1176
(703) 683-0500

DATE: 25 February 2000

Respectfully submitted,

J. ERNEST KENNEY
Attorney for Applicant
Registration Number: 19,179

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

International Patent Application
No. PCT/EP99/03107

PCT/DO/EO/US

International Filing Date: 06 May 1999

Applicant: Nikolaos PAPADOPOULOS et al.

For: MOBILE RADIO TELEPHONE SYSTEM HAVING AN INDENTITY WHICH CAN BE DYNAMICALLY CHANGED

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

This paper accompanies documents submitted to establish the U.S. national stage of the above-identified international patent application.

The claims were not amended during the international phase. Before calculation of the filing fee and before examination, please amend the application as follows:

IN THE CLAIMS:

Please amend the original as-filed claims as follows:

Claim 3, line 1; delete "or 2";

Claim 4, line 1; delete "or 2";

Claim 5, line 1; change "any of claims 1 to 4" to --claim 1--;

Claim 9, line 1; change "any of claims 5 to 7" to --claim 5--;

Claim 10, line 1; change "any of claims 6 to 9" to --claim 6--;

Claim 11, line 1; change "any of claims 6 to 10" to --claim 6--;

Claim 12, line 1; change "any of claims 6 to 10" to --claim 6--;

Claim 15, line 1; delete "or 14";

Claim 16, line 1; change "any of claims 13 to 15" to --claim 13--;

REMARKS

All rights are reserved to the original claimed subject matter. The claims have been amended to reduce the filing fees and to correct any improper multiple dependent claims. Examination of the application as amended is respectfully requested.

Respectfully submitted,
BACON & THOMAS, PLLC

J. ERNEST KENNEY
Attorney for Applicant
Registration Number 19,179

BACON & THOMAS, PLLC
625 Slaters Lane, Fourth Floor
Alexandria, Virginia 22314

Telephone: (703) 683-0500
Facsimile: (703) 683-1080

Date: February 24, 2000

S:\Producer\jek\PAPADOPOULOS - pct03107\preliminary amendment.wpd

Mobile radio system with dynamically alterable identity

This invention relates to a mobile radio system having a plurality of mobile terminals connected with a mobile switching center via an air interface for communication control and optionally for billing, as stated in the preamble of claim 1 or claim 2. In addition the invention relates to a method for operating mobile terminals of a mobile radio system according to the preamble of claim 6, and to a subscriber identity module for a mobile terminal according to the preamble of claim 13.

In known mobile radio systems, for example the GSM network, the mobile terminals are usually connected with a mobile switching center via an air interface. The mobile terminals are controlled by a subscriber identity module. This subscriber identity module is usually designed in the form of a chip card in ID-1 or ID-000 format disposed removably in the mobile terminal. The subscriber identity module (SIM) is used inter alia for granting the authorized person access to the mobile radio network and permitting call accounting. For this purpose the SIM contains a subscriber identity (International Mobile Subscriber Identity, IMSI) for identifying the subscriber world-wide in all GSM networks. The subscriber identity usually has the billing account assigned thereto through which call accounting is done.

In particular for double utilization of a mobile phone (e.g. for business and private purposes) it has proven advantageous to equip the subscriber identity module with at least one further identity. European patent specification EP 0 579 655 B1 discloses a method for mobile telephone systems controlled by subscriber identity modules each containing at least two alternatively usable identities. When beginning to operate the mobile unit the user can activate the desired identity through the insert direction of the subscriber identity module or by entering a personal identification number (PIN) via the keyboard.

The disadvantage of the known method is that the alternatively usable identities must already be stored in the card upon its issue. That means in practice that the number of alternatively usable identities must already be known when a mobile radio connection is applied for. In particular when a new identity is to be allotted later this can only be done by issuing a new card, i.e. a new subscriber identity module.

The problem of the invention is therefore to state a mobile radio system and a method for operating the mobile radio system and a subscriber identity module which avoid the abovementioned disadvantages.

This problem is solved by a mobile radio system according to claims 1 and 2 and by a method according to claim 6 and a subscriber identity module according to claim 13.

Advantageous developments of the invention are stated in the dependent claims.

According to claim 1 a mobile radio system is provided wherein the subscriber identity module used for controlling the mobile terminals contains a calculation rule for calculating at least one further identity from the stored identity. Identities generated in accordance with the calculation rule are associated accordingly in the mobile switching center. An alternative for solving the abovementioned problem according to claim 2 is to design the subscriber identity module so as to permit generation of a request signal which is transmitted to the mobile switching center and processed there, whereupon an alternative identity is communicated to the subscriber identity module via the air interface.

The advantage of the solutions according to claims 1 and 2 is that one need not store all identities on the chip card, i.e. the subscriber identity module. This makes the system more flexible to handle since the additional identities can be assigned after the card is issued to the user, i.e. after he has applied for the connection. It is thus possible for the owner of a mobile phone having an associated identity to obtain a second identity at a later time without a new card having to be issued.

According to an advantageous development of the invention, the calculation or request for a new identity is triggered by the user by a keyboard entry or via the menu. In the simplest case one can provide in the mobile phone a changeover switch having two or more switching positions each triggering an associated calculation process. Alternative menu-driven triggering has the advantage that the menu display can be controlled by the subscriber identity module so that no changes need be made in the mobile terminal. This advantage also applies to a further advantageous development of the invention by which the calculation or request for a new identity is ini-

tialized by entry of a PIN. In this case a plurality of personal identification numbers with which the user identifies himself as authorized are stored in the subscriber identity module. Entry of a PIN then triggers not only the function enable but also the calculation of the desired subscriber identity if the latter does not correspond to the original identity.

Since the mobile terminals of a mobile radio system are frequently operated in outside networks, it has proven advantageous to calculate a further directory entry (phone number) and/or a further authentication key together with the further identity. In particular the further directory entry has the advantage that the mobile terminal can only be reached with the corresponding phone number in the directory entry. This permits the user to ensure for example that he only gets private calls during a private stay in the territory of an outside network. The different phone numbers for dialing the user also permit the costs assigned to the user that arise in the outside network to be assigned upon forwarding of a "business" call, i.e. a call to the phone number not currently selected.

The invention further relates to a method for operating mobile terminals which generates from a single identity stored in the subscriber identity module the further identities by a calculation rule if required. The method offers the advantage stated above for the mobile radio system according to the invention that one need not store a plurality of identities in a card, but the system can work more flexibly since the card can be issued without having to store all identities that might possibly be used.

According to the invention the calculation of the new identity can be performed either in the subscriber identity module or in the mobile switching center, in which latter case the mobile terminal sends a request to the mobile switching center and the new identity is communicated to the mobile terminal and thus to the subscriber identity module via the air interface of the mobile radio system.

The inventive method provides for the further advantageous development that the current identity is newly calculated for each identity for a check, which is performed at the request of the mobile switching center or the mobile terminal. In this way one need not provide any memory space for storing further identities in the subscriber identity module.

Should the current identity have to be available more quickly, for example due to the calculation time necessary for calculation, it is also possible to store the currently set identity temporarily in the subscriber identity module.

The invention further proposes a subscriber identity module for a mobile terminal in a mobile radio system which is suitable for use by the abovementioned method. For this purpose a calculation rule is stored in the subscriber identity module for calculating at least one further identity from the stored identity. Alternatively, the subscriber identity module can be designed to generate a request signal. In this case the subscriber identity module initializes calculation of the new identity in the network center, so that calculation of the alternative or further identity is not generated in the card, i.e. in the subscriber identity module.

Preferred embodiments of the invention will be explained more closely in the following with reference to Figures 1 to 5, in which:

Figure 1 shows the basic structure of a mobile radio network,

Figure 2 shows the block diagram of a subscriber identity module,

Figure 3 shows a first flow chart of the dynamic IMSI selection,

Figure 4 shows a second flow chart of the dynamic IMSI selection, and

Figure 5 shows an exemplary menu display.

Figure 1 shows a mobile radio system consisting of mobile switching center MZ, base station system BS and mobile station MS consisting of mobile terminal ME and subscriber identity module SIM. Subscriber identity module SIM is a chip card specific to mobile radio and yielding in conjunction with mobile terminal ME operable mobile station MS. Stored in the subscriber identity module are all data necessary for granting network access only to authorized persons and for performing call accounting. The essential tasks of the subscriber identity module are authentication vis-à-vis the mobile radio system and storage of user-specific data. In particular data concerning the identity of the subscriber IMSI are stored in the subscriber identity module. Data and speech are exchanged between mobile unit ME and base station BS by radio transmission. Base stations BS are connected with mobile switching center MZ. Mobile switching center MZ contains a visitor location register and a home location register in which user data are stored temporarily (in the visitor loca-

tion register) or permanently (in the home location register). Important data are in particular the subscribers' IMSI and the directory entries MSISDN associated with the IMSI. According to the invention, subscriber identity module SIM contains one or more calculation rules RV for calculating from identity IMSI permanently stored there at least one further identity $IMSI_w$. In the mobile switching center the further identities associated with an original IMSI are stored or generated by the same calculation rule as in the subscriber identity module.

Figure 2 shows a rough block diagram of subscriber identity module SIM. This SIM contains arithmetic unit CPU connected with program memory ROM, working memory RAM and nonvolatile memory SP, preferably an E^2PROM. Stored in nonvolatile memory SP are original identity IMSI and calculating rule RV for calculating particular new identity $IMSI_w$ at the request of the user or at the request of the mobile terminal or the mobile switching center. Calculating rule RV can also be stored alternatively in the ROM. The $IMSI_w$ newly calculated by given calculating rule RV can also be stored temporarily in working memory RAM so that it is immediately available at the request of the mobile radio system.

Figure 3 shows an example of the flow chart for selecting a further identity. In the figure the program start for IMSI selection is designated S1. The selection request is started either at the request of the user by a menu selection or at the request of the network or the mobile unit. In program step S2 the user is asked for an entry or a previous entry is accepted. In step S3 the selection entry from step S2 is checked, and the corresponding calculating rule is executed according to step S41, S42, ... S4n. If the selected IMSI is the original IMSI no change is made or the value "0" is added to the original IMSI. If identity 1 is selected a calculation is done by calculating rule RV1 and the value "1" is added to the original IMSI. The same applies to all further possible identities up to IMSIn in step S4n.

The newly calculated $IMSI_w$ is then outputted in step S5. The $IMSI_w$ outputted for authentication or a check is newly calculated at each request of the mobile unit to subscriber identity module SIM, in which case the last entered value is accepted instead of the selection entry (S2). Step 2 can be omitted in this case, or consists in an instruction to load the last entered selection entry value from a memory.

Alternatively, the new $IMSI_w$ calculated in step S4 (S41 - S4n) can be stored by the user temporarily in the RAM or E^2PROM of subscriber identity module SIM until the mobile unit is turned off or a new IMSI selected.

Figure 4 shows by way of example a flow chart for the procedure of IMSI selection by entry of a PIN. In step S10 the selection program is started by entry of a new PIN. In step S11 an association for the calculating rule in S12 is generated in accordance with the selected PIN. This association defines which calculation rule is selected (not shown in the figure) or which identity value is added to original identity IMSI by means of a single calculating rule RV (step S12).

After execution of calculation rule S12, which consists in the simplest case of the addition of an identity value to the original IMSI, the new identity is outputted as described above for Figure 3, step S5.

In the case of IMSI selection by means of a switch optionally having a plurality of switch positions, step S10 can be omitted since a new association can be determined directly from the switch position, for example, or the switch position directly indicates this association.

The procedures shown in Figures 3 and 4 presuppose of course that for checking entitlement to network access the IMSIs obtainable by the calculation rules, i.e. the possible IMSIs, are either stored in the mobile switching center or can be calculated there as in the subscriber identity module, in which case the permissible identity values must be stored.

In the case of a new identity which was not approved when subscriber identity module SIM was issued, the new identity values required for calculating the new identity from the original IMSI can be inputted either directly by means of a terminal or using the OTA (over-the-air) function via the air interface.

Figure 5 shows by way of example a menu displaying the possible identities with the corresponding identity values. The currently selected identity is indicated in the menu by emphasis, e.g. underlining. A new identity can be selected for example by means of "forward keys" usually disposed in a mobile radio device and an "OK" function.

Patent claims

1. A mobile radio system having a plurality of mobile terminals (ME) connected with a mobile switching center (MZ) via an air interface for communication control and optionally for billing, the mobile terminals (ME) being controlled by a subscriber identity module (SIM) in which data for associating at least one user are stored, the subscriber identity module (SIM) having an identity (IMSI) associated therewith, characterized in that the subscriber identity module (SIM) contains a calculation rule for calculating from the stored identity (IMSI) at least one further identity ($IMSI_w$), the identities generated by the calculation rule being associated accordingly in the mobile switching center (MZ).

2. A mobile radio system having a plurality of mobile terminals (ME) connected with a mobile switching center (MZ) via an air interface for communication control and optionally for billing, the mobile terminals (ME) being controlled by a subscriber identity module (SIM) in which data for associating at least one user are stored, the subscriber identity module (SIM) having an identity (IMSI) associated therewith, characterized in that the subscriber identity module (SIM) is designed to generate a request signal and in response to this request signal the mobile switching center (MZ) communicates an alternative identity ($IMSI_w$) associated with the subscriber identity module (SIM).

3. A mobile radio system according to claim 1 or 2, characterized in that the calculation or request for a new identity ($IMSI_w$) is effected by a user entry via keyboard or menu.

4. A mobile radio system according to claim 1 or 2, characterized in that the calculation or request for a new identity ($IMSI_w$) is initialized by entry of a PIN.

5. A mobile radio system according to any of claims 1 to 4, characterized in that a further directory entry and/or a further key are calculated together with the further identity ($IMSI_w$).

6. A method for operating mobile terminals (ME) of a mobile radio system which are controlled by a subscriber identity module suitable for operation with at least two identities, characterized in that the further identities are generated by a cal-

culation rule, if required, from a single identity (IMSI) stored in the subscriber identity module (SIM).

7. A method according to claim 6, characterized in that the calculation is executed in the subscriber identity module (SIM).

8. A method according to claim 6, characterized in that the calculation is performed in the mobile switching center (MZ) at the request of the mobile terminal (ME), and the new identity is communicated to the mobile terminal (ME) via the air interface of the mobile radio system.

9. A method according to any of claims 5 to 7, characterized in that an identity is set by entry of a personal identification number (PIN) via menu and/or keyboard.

10. A method according to any of claims 6 to 9, characterized in that a further directory entry and/or a further key are calculated together with the further identity ($IMSI_w$).

11. A method according to any of claims 6 to 10, characterized in that the further identity ($IMSI_w$) is newly calculated at each check or request by the mobile switching center (MZ) or the mobile terminal (ME).

12. A method according to any of claims 6 to 10, characterized in that the further identity ($IMSI_w$) is stored temporarily in the subscriber identity module (SIM) until a new identity (IMSI) is selected or the mobile terminal (ME) is turned off.

13. A subscriber identity module (SIM) for a mobile terminal (ME) in a mobile radio system in which an identity (IMSI) for a user is stored, characterized in that a calculation rule is stored in the subscriber identity module (SIM) for calculating from the stored identity (IMSI) at least one further identity ($IMSI_w$).

14. A subscriber identity module (SIM) for a mobile terminal (ME) in a mobile radio system in which an identity (IMSI) for a user is stored, characterized in that the subscriber identity module (SIM) is designed to generate a request signal which requests an alternative identity (IMSI).

15. A subscriber identity module (SIM) according to claim 13 or 14, characterized in that the subscriber identity module contains a temporary memory area (RAM) for temporarily storing a further identity ($IMSI_w$) which is calculated or communicated by the mobile switching center (MZ).

16. A subscriber identity module according to any of claims 13 to 15, characterized in that a memory address pointer is provided for pointing to a selected temporary memory location where the currently selected identity (IMSI, $IMSI_w$) is stored.

Abstract

The invention relates to a mobile radio system having a plurality of mobile terminals (ME) connected with a mobile switching center (MZ) via an air interface for communication control and optionally for billing. The mobile terminals (ME) are controlled by a subscriber identity module (SIM) in which data for associating at least one user are stored, the subscriber identity module (SIM) having an identity (IMSI) associated therewith. For utilizing a mobile radio device for different purposes, such as private and business, a subscriber identity module is known which contains at least two permanently stored identities and thus has the disadvantage of being inflexible. The invention therefore proposes a subscriber identity module (SIM) containing a calculation rule for calculating from the stored identity (IMSI) at least one further identity ($IMSI_w$), the identities generated by the calculation rule being associated accordingly in the mobile switching center (MZ).

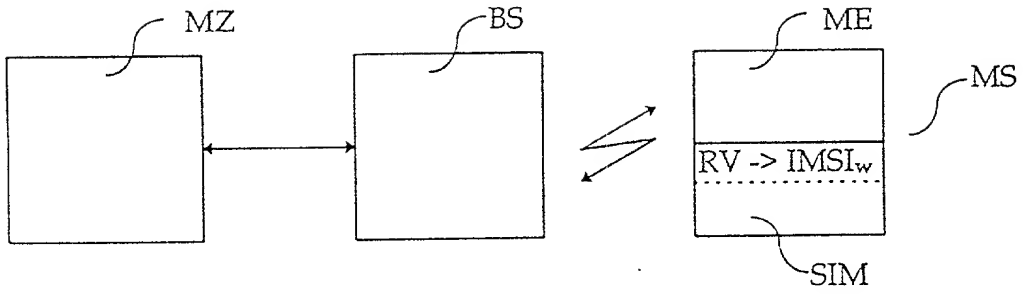

Fig. 1

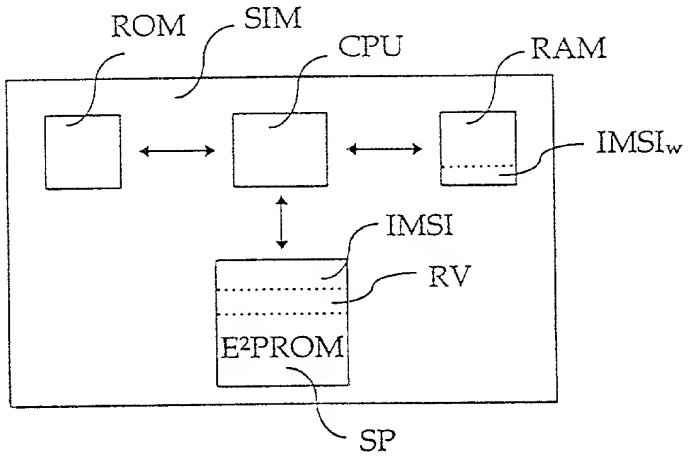

Fig. 2

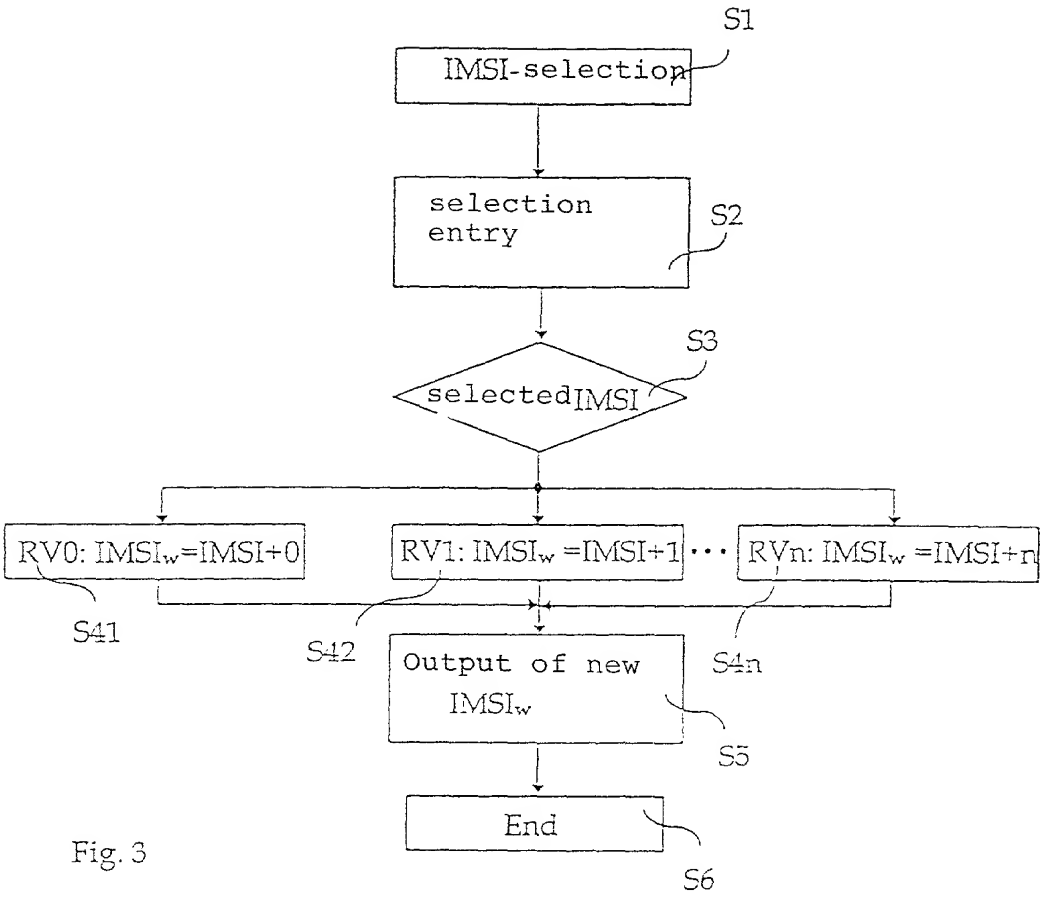
S1
IMSI-selection
selection entry
S2
S3
selectedIMSI
RV0: IMSIw=IMSI+0
RV1: IMSIw =IMSI+1
RVn: IMSIw =IMSI+n
S41
S42
S4n
Output of new IMSIw
S5
End
S6

Fig. 3

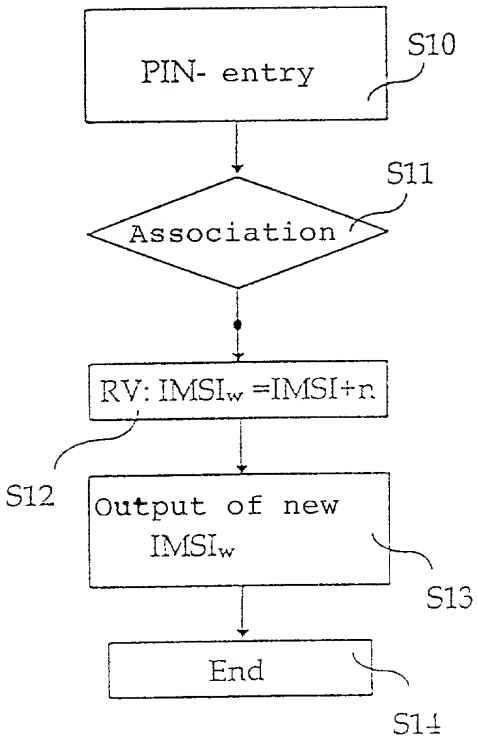
PIN- entry
S10
Association
S11
RV: IMSIw =IMSI+n
S12
Output of new IMSIw
S13
End
S14

Fig. 4

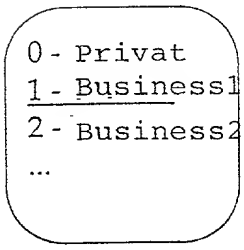
0 - Privat
1 - Business1
2 - Business2
...

Fig. 5

5A0455

ATTORNEY/DOCKET NO: **JEK/Papadopoulos**

DECLARATION FOR PATENT APPLICATION AND APPOINTMENT OF ATTORNEY

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name; I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention (Design, if applicable) entitled:
MOBILE RADIO SYSTEM WITH DYNAMICALLY ALTERABLE IDENTITY

the specification of which (check one):

☐ is attached hereto, or ☒ was filed on: **06 May 1999** as U.S. Application Number or PCT International Application Number: **09/485,679**

and (if applicable) was amended on:

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in *Title 37, Code of Federal Regulations, §1.56*. I hereby claim foreign priority benefits under *Title 35, United States Code §119* of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

PRIOR FOREIGN APPLICATION(S)			PRIORITY CLAIMED	
Number	**Country**	**Day/Month/Year Filed**	**Yes**	**No**
198 28 735.6	Germany	29 June 1998		

☐ Additional Priority Application(s) Listed on Following Page(s)

I HEREBY CLAIM THE BENEFIT UNDER TITLE 35 U.S. CODE §119(E) OF ANY U.S. PROVISIONAL APPLICATIONS LISTED BELOW.	
Application Number	**Day/Month/Year Filed**

☐ Additional Provisional Application(s) Listed on Following Page(s)

I hereby claim the benefit under *Title 35, United States Code, §120* of any United States application(s) or PCT international application(s) designating The United States of America listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of *Title 35, United States Code, §112*, I acknowledge the duty to disclose information which is material to patentability as defined in *Title 37, Code of Federal Regulations, §1.56* which became available between the filing date of the prior application(s) and the national or PCT international filing date of this application:

Application Number	Filing Date	Status - Patented, Pending or Abandoned

☐ Additional US/PCT Priority Application(s) listed on Following Page(s)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under *section 1001 of title 18 of the United States Code* and that such willful ~~false~~ statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: I (We) hereby appoint as my (our) attorneys, with full powers of substitution and revocation, to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: J. Ernest Kenney, Reg. No. 19,179; Eugene Mar, Reg. No. 25,893; Richard E. Fichter, Reg. No. 26,382; Thomas J. Moore, Reg. No. 28,974; Joseph DeBenedictis, Reg. No. 28,502; Benjamin E. Urcia, Reg. No. 33,805; and

I(we) authorize my(our) attorneys to accept and follow instructions from **Klunker Schmitt-Nilson Hirsch** regarding any matter related to the preparation, examination, grant and maintenance of this application, any continuation, continuation-in-part or divisional based thereon, and any patent resulting therefrom, until I(we) or my(our) assigns withdraw this authorization in writing.

Send correspondence to: **~~BACON & THOMAS,~~ PLLC**
625 Slaters Lane - ~~4th~~ Floor
~~Alexandria, VA~~ 22314-1176

Telephone Calls to: **J. Ernest Kenney (703) 683-0500**

FULL NAME OF FIRST OR SOLE INVENTOR	CITIZENSHIP
Nikolaos PAPADOPOULOS	~~Germany~~ GREECE
RESIDENCE ADDRESS Isabellastrasse 16, D-80798 Muchen, Germany DE	POST OFFICE ADDRESS IS THE SAME AS RESIDENCE ADDRESS UNLESS OTHERWISE SHOWN BELOW
DATE April 25, 2000	SIGNATURE N. Papadopoulos

☐ *See following page(s) for additional joint inventors.*

ATTORNEY/DOCKET NO: **JEK/Papadopoulos**

CONTINUATION OF DECLARATION FOR PATENT APPLICATION AND APPOINTMENT OF ATTORNEY

Page 2

PRIOR FOREIGN APPLICATION(S) (35 USC §119)			PRIORITY CLAIMED	
Number	**Country**	**Day/Month/Year Filed**	**Yes**	**No**

PRIOR PROVISIONAL APPLICATIONS 35 U.S. CODE §119(E)	
Application Number	**Day/Month/Year Filed**

PRIOR U.S. OR PCT INTERNATIONAL APPLICATIONS (35 U.S. CODE §120)		
Application Number	**Filing Date**	**Status - Patented, Pending or Abandoned**

FULL NAME OF JOINT INVENTOR 2-a ~~Klaus VEDDER~~	CITIZENSHIP **Germany**
RESIDENCE ADDRESS Ainmillerstrasse 38, D-80801 Munchen, Germany DEX	POST OFFICE ADDRESS IS THE SAME AS RESIDENCE ADDRESS UNLESS OTHERWISE SHOWN BELOW
DATE 13 May 2000	SIGNATURE

FULL NAME OF JOINT INVENTOR	CITIZENSHIP
RESIDENCE ADDRESS	POST OFFICE ADDRESS IS THE SAME AS RESIDENCE ADDRESS UNLESS OTHERWISE SHOWN BELOW
DATE	SIGNATURE

FULL NAME OF JOINT INVENTOR	CITIZENSHIP
RESIDENCE ADDRESS	POST OFFICE ADDRESS IS THE SAME AS RESIDENCE ADDRESS UNLESS OTHERWISE SHOWN BELOW
DATE	SIGNATURE

FULL NAME OF JOINT INVENTOR	CITIZENSHIP
RESIDENCE ADDRESS	POST OFFICE ADDRESS IS THE SAME AS RESIDENCE ADDRESS UNLESS OTHERWISE SHOWN BELOW
DATE	SIGNATURE

☐ *See following pages for additional joint inventors/priority applications.*